

Claims:

1 1. Process for the manufacture of optical fibers comprising:

2 (a) preparing an optical fiber preform,

3 (b) heating the preform to the softening temperature, and

4 (c) drawing an optical fiber from the preform

5 the invention characterized in that the optical fiber preform is produced by:

6 (i) preparing a porous silica body of silica particles,

7 (ii) heating the porous silica body in a fluorine atmosphere for a
8 period of 10 - 240 minutes to predeposit fluorine on the silica
9 particles, and

10 (iii) heating the porous silica body at a temperature greater than
11 1300 °C, in an atmosphere devoid of fluorine, to consolidate the
12 porous silica body into a preform.

1 2. The process of claim 1 wherein the fluorine atmosphere comprises SiF₄.

1 3. The process of claim 2 wherein the fluorine atmosphere is greater than 10%
2 SiF₄ .

1 4. Process for the manufacture of optical fiber preforms comprising:

2 (a) preparing a porous silica body of silica particles, said porous silica
3 body having a weight greater than 5 kg,

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(b) heating the porous silica body to a temperature in the range

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800-1000 °C in a fluorine atmosphere for a period of 10 - 240 minutes to

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predeposit fluorine on the silica particles, and

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(c) heating the porous silica body at a temperature greater than 1300

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°C, in an atmosphere devoid of fluorine, to consolidate the porous silica

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body.

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5. The process of claim 4 wherein the fluorine atmosphere comprises SiF₄.